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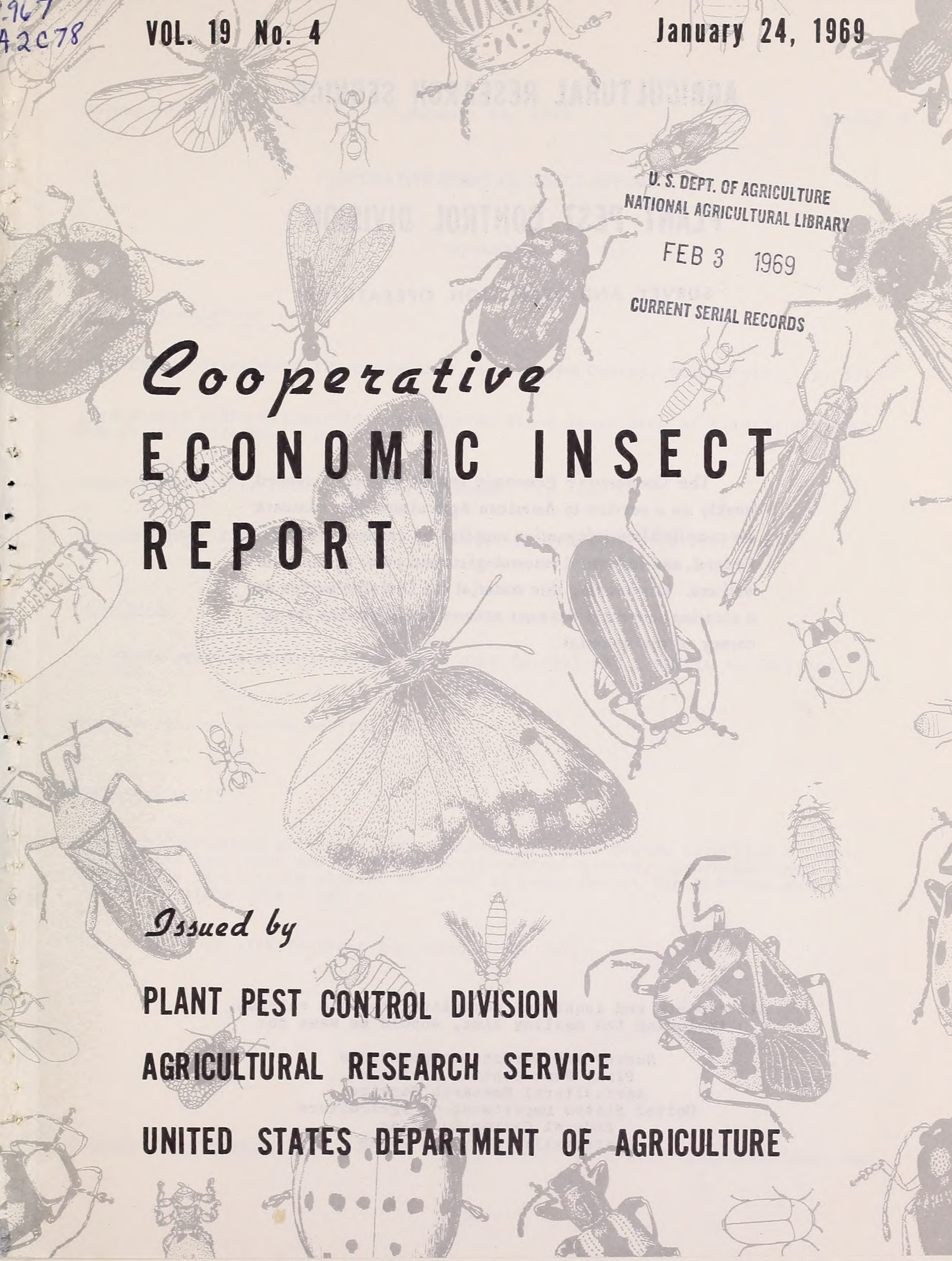

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Hyattsville, Maryland 20782

Volume 19 January 24, 1969 Number 4

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

CALIFORNIA FIVE-SPINED IPS increasing in Mariposa County, California. (p. 43).

PINE NEEDLE SCALE widespread on ponderosa pines in an area of Klamath National Forest in California. (p. 43).

SHORT-NOSED CATTLE LOUSE heavy in Oklahoma. (p. 44).

NORTHERN FOWL MITE increasing in northwestern Arkansas. (p. 44).

Detection

New State records include an APHID in Utah (p. 41) and a WEEVIL in Maryland (p. 45).

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EUROPEAN CORN BORER generally more abundant in those States reporting in 1968. Substantial increases occurred in 4 North Central States. Overwintering populations in Illinois highest for past 18 years except for 1955 and heaviest in Indiana since 1957. (p. 47).

Distribution of Alfalfa Plant Bug (map). (p. 54).

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WEATHER BUREAU'S 30-DAY OUTLOOK

MID-JANUARY TO MID-FEBRUARY

The Weather Bureau's 30-day outlook calls for temperatures to average colder than normal everywhere east of the Rockies except southern Florida and most of the Northeast, where near normal temperatures are expected. The Great Basin and the southern Plateau should have above normal temperatures, but California's interior valley, below normal. Elsewhere in the West, near normal temperatures are indicated. The Midwest and the Missouri Valley should receive more precipitation than normal, predominantly in the form of snow. The Great Basin, Texas, and the Southeast should be drier than normal. Elsewhere, near normal amounts are expected.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through the Superintendent of Documents, Washington, D.C. 20250. Price $5.00 a year.

WEATHER OF THE WEEK ENDING JANUARY 20

HIGHLIGHTS: Stormy weather prevailed over the West. Central and northeastern areas were mostly mild and murky. This type of weather came to the Southeast over the weekend.

PRECIPITATION: A storm off the Pacific coast brought inclement weather to much of the Western United States. Strong winds and driving rains soaked coastal areas while heavy snow fell in the Cascades, northern Sierras, and eastward to the Rocky Mountains. Snow depths now approach 20 feet in the Cascades above 5,500 feet. Most of the West, even the deserts, received generous precipitation during the week. Precipitation totals over the West ranged from over 2 inches along the Pacific coast to about an inch along the Continental Divide except less than 0.3 inch over portions of the Great Basin. Only light rain fell along the eastern slopes of the Rockies and the western edge of the Great Plains. Weekly totals here were generally less than 0.3 inch and some areas received no rain. Most areas from the eastern Great Plains to the Atlantic received significant precipitation. Rain, freezing rain, sleet, or snow or a mixture of precipitation forms occurred from the eastern Dakotas to New York and southward as far as central Indiana slicking roads and highways and causing some damage to trees. Rain in the Southeast came late in the week or over the weekend. Totals over most of the Mississippi and lower Ohio River Valleys ranged from 1 to more than 2 inches. Fog covered much of the East over the weekend.

Weather continued on page 46.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

GREENBUG (Schizaphis graminum) - NEW MEXICO - Increasing on barley at Roswell, Chaves County; 100+ per linear foot in several fields. (Mathews). Increased damage apparent on irrigated wheat in Curry County. (Campbell). TEXAS - Wheat surveyed January 13-15 in 13 panhandle counties. Maximum number per row foot in nongrazed fields by county: Donley 100; Carson 50; Armstrong and Collingsworth 30; Gray, Lipscomb, and Wheeler 10; Sherman, Dallam, Hartley, Roberts, Ochiltree, and Hemphill 5. Numbers decreased past 8 weeks in northern panhandle area. Wheat generally good. (Daniels). Some damaged wheat in Haskell, Foard, Cottle, King, and Stonewall Counties in Rolling Plains. Greenbug reported from Hall, Dickens, Motley, Wilbarger, and Wichita Counties. Not generally heavy on wheat in area, but greenbug plus dry weather causing some die out. (Boring). Up to 111 per row foot during survey of small grains in Denton County January 8. Counts 100+ per linear foot in one field; less than 10 per row foot in 6 of 10 fields examined. Grazed fields generally less infested than nongrazed fields. (Turney). OKLAHOMA - Absent in most fields but ranged 5-20 per foot in occasional fields in Haskell, Muskogee, Sequoyah, and Oklahoma Counties. Averaged 10 per foot in Kiowa County field and 1 per 5 feet in Logan County. Very light to absent in Caddo County. (Okla. Coop. Sur.). KANSAS - Negative on wheat examined in 3 northeast, 5 east-central, and 5 southeast counties. (Simpson).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARIZONA - Up to 1,800 per 100 sweeps at Yuma, Yuma County. (Ariz. Coop. Sur.). KANSAS - Negative in southeast district on established and seedling alfalfa. (Simpson). MISSISSIPPI - Very light on Oktibbeha County alfalfa. (Dinkins, Jan. 10).

CORN, SORGHUM, SUGARCANE

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - OKLAHOMA - Live larvae in half of cornstalks in one McIntosh County field and in 30 percent of 2 fields in Muskogee and Pittsburg Counties. (Okla. Coop. Sur.).

A BILLBUG (Sphenophorus venatus vestitus) - FLORIDA - Larvae severe January 2 in stems and soil around 10 sugarcane plants at Apopka, Orange County. Larvae taken January 8 from roots of all 5 sugarcane plants inspected at Apopka. (Holley et al.). Mostly larvae moderate to severe January 8 in stems, roots, and soil of all 10 clumps of sugarcane inspected at Groveland, Lake County. (Henderson).

TURF, PASTURES, RANGELAND

AN APHID (Capitophorus patonkus) - UTAH - Collected (probably on Achillea) at Cedar Breaks National Monument at 10,000 feet elevation in Iron County July 15, 1963, and at Duck Creek Camp, Kane County, July 14, 1963, by G.F. Knowlton. Identified by D. Hille Ris Lambers. This is a new State record. (Knowlton, Jan. 14).

AN ARMORED SCALE (Diaspis dignus) - FLORIDA - Taken on button-snakeroot (Eryngium yuccifolium) at Samsula, Volusia County, for a new Florida Department of Plant Industry host record. (Desin, Aug. 9).

BERMUDAGRASS MITE (Aceria neocynodonis) - CALIFORNIA - Medium on Bermuda grass at Anderson, Shasta County. This is a new county record. (Cal. Coop. Rpt., Jan. 10).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - MISSISSIPPI - One adult and no larvae per square foot in Oktibbeha County field. (Dinkins, Jan. 10). MISSOURI - Average number of egg punctures per square foot by county: St. Charles 5.7, New Madrid 4.7, Cape Girardeau 3.4, Ste. Genevieve 2.6, Howell 1.3, and in Ralls, Osage, Maries, Laclede, and Lawrence - 0.3 and less. The first 3 counties averaged over 9 eggs per puncture. Percent viability of eggs ranged 57-100 (averaged 95) percent. (Munson).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - Averaged 5 per 100 sweeps of alfalfa at Yuma, Yuma County. (Ariz. Coop. Sur.).

RED-CLOVER SEED WEEVIL (Tychius stephensi) - MISSOURI - Collected on red clover at Valley Park in St. Louis County July 13, 1967, by R.E. Munson and L.R. Hanning. This is a new county record. (Munson).

DECIDUOUS FRUITS AND NUTS

EUROPEAN RED MITE (Panonychus ulmi) - CALIFORNIA - General infestation medium on cherry trees at San Jose, Santa Clara County. (Cal. Coop. Rpt., Jan. 10).

CITRUS

Quarterly Citrus Insect and Mite Outlook in Florida - January through March - This outlook is based on the assumption that weather beyond the period of the current U.S. Weather Bureau 30-day Outlook will be normal. Therefore, the forecasts given below cannot be viewed with the same degree of confidence as those in the "Insect and Disease Summary" usually released twice each month by this station.

CITRUS RUST MITE (Phyllocoptruta oleivora) expected to remain moderate with slight decrease through February and increase in March. Will be heavy in about 20 percent of groves. TEXAS CITRUS MITE (Eutetranychus banksi) will increase gradually but expected to be moderate. Will be heavy in about 8 percent of groves in scattered locations. CITRUS RED MITE (Panonychus citri) will gradually increase but expected to remain in low range. Predicted heavy for about 5 percent of groves in scattered locations. SIX-SPOTTED MITE (Eotetranychus sexmaculatus) will appear on inside leaves in few groves. Expected to be important in less than 2 percent of groves. GLOVER SCALE (Lepidosaphes gloverii) will change very little. Expected to be lower than in recent years and remain at low to moderate level. PURPLE SCALE (L. beckii) and CHAFF SCALE (Parlatoria pergandii) will remain very low. YELLOW SCALE (Aonidiella citrina) expected to increase slightly but remain in low range. BLACK SCALE (Saissetia oleae) will remain low and unimportant through March. An ARMORED SCALE (Unaspis citri) will occur in some previously uninfested groves and will spread in those now infested. APHIDS will start to appear late in February and increase rapidly in March with peak expected early in April. (W.A. Simanton).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy on citrus trees and fruit at Porterville, Tulare County. (Cal. Coop. Rpt.).

ORNAMENTALS

ARMORED SCALES - FLORIDA - All stages of Fiorinia theae (tea scale) severe on all 100 lusterleaf holly plants inspected in nursery at Glen Saint Mary, Baker County. (Collins, Jan. 7). The following were collected in 1968 for new Florida Department of Plant Industry host records. Abgrallaspis cyanophylli on asparagus-fern (Asparagus plumosus) at Stuart, Martin County. (Campbell, Oct. 7). Chrysomphalus dictyospermi) (dictyospermum scale) on Cleyera japonica at Williston, Levy County. (Graham, Oct. 29). CALIFORNIA - Diaspis boisduvalii medium week ending January 10 on orchid nursery stock in orchid house at Paso Robles, San Luis Obispo County. D. boisduvalii, Aspidiotus nerii (oleander scale), and Pseudococcus microcirculus (a mealybug) were heavy on cymbidium and cattleya orchids in orchid house at Menlo Park, San Mateo County. (Cal. Coop. Rpt.).

A WALSHIID MOTH (Periploca nigra) - CALIFORNIA - Adults and larvae medium to heavy on juniper nursery stock at San Luis Obispo, San Luis Obispo County. (Cal. Coop. Rpt., Jan. 10).

SPIDER MITES (Tetranychus spp.) - NEW MEXICO - Moderate on house plants in several greenhouses at Las Cruces area, Dona Ana County. (Elson).

FOREST AND SHADE TREES

CALIFORNIA FIVE-SPINED IPS (Ips confusus) - CALIFORNIA - About 30 ponderosa and sugar pines in 10-acre area infested at Sweetwater Point, Mariposa County. Thinning operations responsible. Infestation increasing. (Swinford, USFS).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - CALIFORNIA - Widespread on ponderosa pines in Tennant Road of Goosenest Ranger District, Klamath National Forest. (Wilcox, USFS). Medium on twigs on spruce trees locally in game reserve at Tulelake, Siskiyou County. Prevalent past several months in many areas in forests. (Cal. Coop. Rpt.).

A BARK APHID (Pineus sp.) - CALIFORNIA - Infesting Coulter pines in a plantation and pine reproduction in Fay Creek Plantation and adjacent area of Cleveland National Forest. About 60 trees in 2-acre area show damage; infestation increasing. (Boozer, Swain, USFS).

A CONIFER APHID (Cinara occidentalis) - CALIFORNIA - Medium on fir nursery stock at Santa Cruz, Santa Cruz County. (Cal. Coop. Rpt., Jan. 10).

ARMORED SCALES - FLORIDA - The following were collected in 1968 for new Florida Department of Plant Industry host records. Pinnaspis strachani on mahogany (Swietenia mahagoni) at Miami, Dade County. (Sloan, Apr. 26). Diaspidiotus ancylus (Putnam scale) on Chinese chestnut (Castanea mollissima) at Jay, Santa Rosa County. (Kuitert, May 5). Aonidiella citrina (yellow scale) on Magnolia sp. at St. Cloud, Osceola County (Crews, Oct. 28) and on Burford holly (Ilex cornuta var. burfordii) at Bardin, Putnam County (Graham, Dec. 12).

SOFT SCALES - CALIFORNIA - Mycetococcus ehrhorni heavy on live oaks at Lafayette, Contra Costa County. (Cal. Coop. Rpt.). FLORIDA - Pulvinaria psidii (green shield scale) taken on Australian brush-cherry (Eugenia paniculata) at Taft, Orange County, for a new Florida Department of Plant Industry host record. (Campbell, Oct. 7, 1968).

A MARGARODID SCALE (Neosteingelia texana) - FLORIDA - Taken on hickory (Carya sp.) near Santa Fe River, Columbia County, for a new Florida Department of Plant Industry host record. (Graham, Nov. 3, 1968).

AN APHID (Lachnus salignus) - ARIZONA - Heavy on willows at Tempe area, Maricopa County. (Ariz. Coop. Sur.).

MAN AND ANIMALS

SCREW-WORM (*Cochliomyia hominivorax*) - Total of 4 cases reported in U.S. January 12-18 as follows: TEXAS - Brooks, Dimmit, Kenedy, Jim Hogg. Total of 91 cases reported in portion of Barrier Zone in Republic of Mexico January 6-11 as follows: Sonora 55, Chihuahua 4, Coahuila 2, Nuevo Leon 18, Tamaulipas 12. Total of 3 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 11,568,000; Mexico 37,400,000. (Anim. Health Div.).

COMMON CATTLE GRUB (*Hypoderma lineatum*) - OKLAHOMA - Larval average per back by county: Osage 14, Rogers and Muskogee 4, and Cherokee 3. (Okla. Coop. Sur.). ARKANSAS - Lighter than normal. Bumps appearing in backs of cattle about 30 days later than normal. (Boyer, Simco).

CATTLE LICE - ALABAMA - Generally much lighter than usual on cattle statewide. Some increase reported in Bibb and other counties. (McQueen). OKLAHOMA - Mostly *Haematopinus eurysternus* (short-nosed cattle louse) heavy on cattle in Texas, Ottawa, and Tillman Counties. (Okla. Coop. Sur.).

NORTHERN FOWL MITE (*Ornithonyssus sylviarum*) - ARKANSAS - Increasing in poultry flocks in northwest area. (Simco).

BLACK-LEGGED TICK (*Ixodes scapularis*) - OKLAHOMA - Light on cattle and horses checked in Cherokee County. (Okla. Coop. Sur.).

STORED PRODUCTS

RICE WEEVIL (*Sitophilus oryzae*) - CALIFORNIA - Adults heavy in seed corn in storage area at Davis, Yolo County. (Cal. Coop. Rpt.).

BENEFICIAL INSECTS

PTEROMALID WASPS - OKLAHOMA - *Euneura lachni* reared from *Cinara* sp. collected on pine in Pushmataha County February 1967. *Asaphes lucens* from *Schizaphis graminum* (greenbug) collected on wheat in Tulsa County April 1967 and from *Aphis gossypii* (melon aphid) in Payne County July 1967. *Pachyneuron siphonophorae* from melon aphid collected in Payne County July 1967 and from greenbug* on sorghum in Roger Mills County August 1968. Determined by B.D. Burks. (Okla. Coop. Sur.).

BRACONIDS - OKLAHOMA - *Aphidius smithi* reared from *Acyrthosiphon pisum* (pea aphid) collected in Tulsa County April 1967. *Lysiphlebus testaceipes* from *Aphis craccivora* (cowpea aphid) collected in Tulsa County April 1967; from melon aphid in Payne County July 1967; from greenbug* on wheat in Tulsa County April 1967, and on sorghum in Roger Mills County August 1968. Determined by P.M. Marsh. (Okla. Coop. Sur.).

ENCYRTID WASPS - OKLAHOMA - *Aphidencyrtus aphidivorus* reared from melon aphid collected in Payne County in July 1967. *Comperia merceti* from oothecae of *Supella supellectilium* (brown-banded cockroach) collected in home at Perry, Noble County, November 1968. Determined by B.D. Burks. (Okla. Coop. Sur.).

A EULOPHID WASP (*Tetrastichus minutus*) - OKLAHOMA - Reared from melon aphid collected in Payne County July 1967. Determined by B.D. Burks. (Okla. Coop. Sur.).

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* According to recent taxonomic studies by L.M. Russell. This aphid on sorghum appears to be this species.

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

MEXICAN FRUIT FLY (*Anastrepha ludens*) - TEXAS - Male trapped November 26, 1968, in 60-acre grove in Hidalgo County is third specimen of season. (PPC South. Reg., Dec. Rpt.).

PINK BOLLWORM (*Pectinophora gossypiella*) - CALIFORNIA - Survey at seasonal low. Postharvest gin trash and lint cleaner examinations completed December 6 in Kern County; inspection of 4,412 bushels of gin trash from 26 gins represents sampling of all cotton-producing areas in county; all surveys negative. Operation of 100 sex lure traps continued in Coachella Valley, Riverside County; 20 moths trapped during December, but none since December 13. ARIZONA - Lint cleaner inspections during December 1968 continued to show increased numbers of larvae. NEW MEXICO - Late seasonal surveys of cotton fields and lint cleaners by State and Federal personnel show populations at lowest levels since 1964. Infestations economic in only few fields in Dona Ana and Eddy Counties. Surveys of cotton stalks showed approximately 50 percent of full-grown larvae in cocoons attached to stalks dead. (PPC West. Reg.). Field sampled December 16, 1968, showed 70 percent of larvae in trash above ground alive. Of larvae found in soil, 43 percent alive. Another field sampled January 8, 1969, showed 48 percent of larvae above ground and 37.5 percent of larvae in soil alive. Both fields in southern Dona Ana County. (Adams). TEXAS - Infestation in general at lowest level for past 9 years. OKLAHOMA - Lint cleaner inspections during harvest season positive in 24 counties, negative in 10 counties. (PPC South. Reg., Dec. Rpt.).

SWEETPOTATO WEEVIL (*Cylas formicarius elegantulus*) - NORTH CAROLINA - Weevils found December 30, 1968, in one lot of sweetpotatoes in warehouse at Tabor City, Columbus County. (PPC South. Reg.).

INSECT DETECTION

New State Records

A WEEVIL (*Gymnaetron netum*) - MARYLAND - On weeds near Clarksville, Howard County. Collected by C.W. McComb July 6, 1967. Determined by R.E. Warner. (U. Md., Ent. Dept.).

AN APHID (*Capitophorus patonkus*) - UTAH - Collected at Duck Creek Camp in Kane County by G.F. Knowlton July 14, 1963. Determined by D. Hille Ris Lambers. (p. 41).

New County Records

AN APHID (*Capitophorus patonkus*) - UTAH - Iron County. (p. 41).

BERMUDAGRASS MITE (*Aceria neocynodonis*) - CALIFORNIA - Shasta County. (p. 41).

RED-CLOVER SEED WEEVIL (*Tychius stephensi*) - MISSOURI - St. Louis County. (p. 42).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville - 1/10-16, BL - Black cutworm (*Agrotis ipsilon*) 4, granulate cutworm (*Feltia subterranea*) 3. TEXAS - Brownsville - 1/11-17, 2BL, 42-81°F., trace precip. - Armyworm (*Pseudaletia unipuncta*) 26, black cutworm 31, cabbage looper (*Trichoplusia ni*) 1, fall armyworm (*Spodoptera frugiperda*) 6, granulate cutworm 2, salt-marsh caterpillar (*Estigmene acrea*) 2, variegated cutworm (*Peridroma saucia*) 17, yellow-striped armyworm (*Prodenia ornithogalli*) 11.

HAWAII INSECT REPORT

Turf, Pasture - A GRASS WEBWORM (*Herpetogramma licarsisalis*) apparently subsiding on Kauai as lawns over most of island much improved. Pastures slower to recover and in danger of being overrun by weeds in some areas. Remains light to moderate on Hawaii in pastures and lawns in several areas. Damage moderate to heavy on pastures and lawns in windward northeastern Maui; adults numerous over most of island. Damage light on lawns in many Oahu areas but heavy on some Tifgreen lawns in windward area. (Sugawa et al.). Adults of a BILLBUG (*Sphenophorus venatus vestitus*) light in pastures at Hana, Maui. (Ah Sam).

General Vegetables - DIAMONDBACK MOTH (*Plutella xylostella*) larvae, pupae, and adults unusually heavy in celery cabbage farm in Volcano area on Hawaii, elevation 4,000 feet. Usually pest of cole crops at low elevations during warm months. (Yoshioka). CHINESE ROSE BEETLE (*Adoretus sinicus*) adult foliar damage moderate to heavy in all edible ginger fields at Pepeekeo and Papaikou, Hawaii Island. (Yoshioka, Kobayashi). BEAN FLY (*Melanagromyza phaseoli*) remains heavy and damaging on backyard snap bean plantings at Pukalani and Kahului, Maui. (Miyahira).

Fruits - COCONUT SCALE (*Aspidiotus destructor*) heavy on foliage of mountain apple at Halawa Heights and on about 25 banana trees (very light on fruits) in farm at Pearl City, Oahu. Not on banana leaves in windward farms. (Nakao, Funasaki).

Beneficial Insects - A MINUTE EGG PARASITE (*Trichogramma semifumatum*) parasitism rate of *Hypena strigata* (lantana defoliator caterpillar) during December: Hawaii - 31.5 percent at Halepiula (North Kona) and 61.5 percent at Hilo; Kauai - *H. strigata* activity low, eggs scarce; Maui - averaged 58.8 percent at Kihei, Kula, and Ulupalakua. (Yoshioka et al.).

Miscellaneous Pests - Large movement of a MILLIPED (*Trigoniulus lumbricinus*) from weed to residential areas annoying in North Kona district on Hawaii Island. (Kobayashi). GIANT AFRICAN SNAIL (*Achatina fulica*) surveillance and bait applications continuing in localized infested areas on Hawaii and Kauai Islands. Live snails picked up: Hawaii - 42 after heavy rains in December and 90 for past 2 weeks at Kahaluu (North Kona); Kauai - few at Wahiawa. Remains moderate to heavy on wild plants at Kahului and Hana, Maui. (Yoshioka et al.). CLUSTER FLY (*Pollenia rudis*) outbreak in December continues to annoy residents at North Kona and North and South Kohala districts, Hawaii Island, at elevations from 2,500 to 6,100 feet. (Yoshioka, Kobayashi).

Weather continued from page 40.

TEMPERATURE: Mild weather continued over most of the intermountain region with much of the Great Basin averaging 10° to 13° warmer than normal. In contrast cold weather has prevailed in western Montana since mid-December and in eastern Montana since about December 1. Much of Montana averaged 9° to 22° colder than normal. Unusual warming occurred over the eastern Great Plains, the Mississippi and Ohio River Valleys, and the Northeast. Portions of that huge area averaged 10° or more warmer than during the previous week. The average weekly temperature at Des Moines, Iowa, was 17° warmer than a week ago. Pennsylvania experienced the mildest weather in four weeks. Subfreezing weather pushed far southward over the Eastern States early in the week reaching the Florida Panhandle and the northern part of the peninsula on Monday and Tuesday mornings. The East warmed in the latter half of the week with maximums reaching the 40's and with minimums remaining above the freezing level as far north as Ohio. Most of the area from Maryland to Florida averaged cooler than normal, however. (Summary supplied by Environmental Data Service, ESSA.)

Status of the European Corn Borer in 1968[1/]

Introduction: Cooperating agencies in 15 States reported on surveys conducted in their States to determine the abundance of European corn borer (Ostrinia nubilalis (Hübner)) in 1968. All survey data, summaries, or records of field observations were submitted to Survey and Detection Operations in Hyattsville, Maryland, for final processing. Personnel of Entomology Research Division, Agricultural Research Service, kindly reviewed the material after completion.

The 1968 European corn borer survey was conducted during late summer and early fall. The survey is designed to measure the fall populations of European corn borer larvae and is conducted during a favorable time to include a high percentage of late instars, wherever possible. In all cases, except for some minor differences in compiling data, the accepted survey methods were followed. The survey was continued on a district basis whenever possible in 1968. A district is usually a group of counties within a State, in most cases based on Crop Reporting Districts.

In 1966, several of the States reduced the number of districts and/or the number of counties within districts. This change was followed during the 1968 survey. These changes were indicated in Tables 1 and 2 as footnotes in CEIR 17(4):46-52, 1967.

New Distribution: European corn borer was reported for the first time from 10 counties during 1968 according to ARS records; however, these counties were found in States already known to be infested. This was 8 more counties than reported the previous year. Two counties were reported in 1967 from North Dakota; 18 in 1966 from North Dakota and South Carolina; 11 in 1965, all in South Carolina; 5 in 3 States in 1964; and 25 new counties in 1963 in 4 States.

The new distribution reported in 1968 was Baldwin County, Alabama; Tift County, Georgia; and Bamberg, Barnwell, Berkeley, Charleston, Chester, Colleton, Dorchester, and Georgetown Counties, South Carolina. The infestation in Baldwin County, Alabama, is about 180 miles farther south than any previously known infestation in that State. In South Carolina, every county is now known to be infested except Beaufort County where no survey was conducted.

Abundance: European corn borer larvae were generally more abundant in 1968, although decreases were reported in Minnesota and South Dakota. Populations increased over 1967 in 9 of the 11 North Central States included in the survey. Substantial increases occurred in all districts in Illinois, Iowa, Missouri, and Ohio. Increases were also noted in most districts in Indiana, Kansas, Nebraska, North Dakota, and Wisconsin. Overwintering populations in Illinois are the highest for the past 18 years except for 1955 when the average count was 282 borers per 100 plants. Infestations are the heaviest in Indiana since 1957 when the survey was first initiated on a statewide basis. Overwintering populations in southwest (District VII) and west-central (District IV) Missouri are the highest on record for these districts. Greatest increases in Nebraska were in the southeastern counties. Populations were above 100 borers per 100 plants in 36 of the 74 districts surveyed in the 11 North Central States. Average counts of more than 200 borers per 100 plants were recorded in 11 of these districts. The highest population, 335 borers per 100 plants, was in southwest (District X) Iowa. European corn borer populations increased more than twofold in Delaware and Maryland. The population in Delaware (444 borers per 100 plants) is the highest since the fall abundance survey was begun in that State in 1936. Infestations were also very high in other crops in Delaware such as sweet peppers and potatoes. European corn borer was heavier in Arkansas than in 1967 but lighter than in 1966.

[1/] Survey data provided by State agricultural agencies. Data complied and summarized by Survey and Detection Operations, Plant Pest Control Division, Agricultural Research Service, United States Department of Agriculture.

Table 1. Summary by States of European Corn Borer Abundance in Corn, Fall of 1968, Compared with Data for 1967

	1967			1968			Comparable Districts or Counties Surveyed Both Years		
States	No. of Districts Surveyed	Average No. of Borers Per 100 Plants	No. of Counties Surveyed	No. of Districts Surveyed	Average No. of Borers Per 100 Plants	No. of Counties Surveyed	Number	Borers Per 100 Plants 1967	Borers Per 100 Plants 1968
Eastern									
Delaware	1	213	3	1	444	3	1	213	444
Maryland	3	140	13	3	296	13	3	140	296
Total	4		16	4		16			
Average 1/								177	370
North Central									
Illinois	7	63	39	7	199	39	7	63	199
Indiana	12	35	92	12	82	92	12	35	82
Iowa	12	55	99	12	171	99	12	55	171
Kansas	3	44	27	3	98	28	3	44	98
Minnesota	7	53	34	7	42	34	7	53	42
Missouri	7	90	32	7	154	39	7	90	154
Nebraska	5	47	26	5	76	26	5	47	76
North Dakota	1	101	5	1	112	5	1	101	112
Ohio 2/	5	17	33	5	137	33	5	17	137
South Dakota	6	78	35	6	71	35	6	78	71
Wisconsin	9	30	52	9	40	52	9	30	40
Total	74		474	74		482	74		
Average 1/								56	108
Southern									
Arkansas	3	8	11	3	19	11	3	8	19
Other									
Michigan	1	44	15	1	50	40	1	44	50

1/ Weighted average based on districts surveyed.
2/ Based on districts surveyed.

Table 2 - European Corn Borer Abundance in Corn, Fall of 1968, Compared with Data for 1967

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1967	1968
Arkansas (Ark. Ins. Sur.)		
Northwest	8	15
North Central	0	6
Northeast	17	37
Average	8	19
Delaware (Agr. Expt. Sta.)		
New Castle	203	292
Kent	208	512
Sussex	228	528
Average	213	444
Illinois (Natural History Survey, Ext. Ser.)		
Northwest	57	192
Northeast	32	148
West	99	233
Central	90	187
East	29	246
West-southwest	79	216
East-southeast	52	170
Average	63 (63)1/	199 (198)1/
Indiana (Ext. Ser., Expt. Sta.)		
North-northwest	80	121
North-northcentral	66	92
North-northeast	34	84
Northwest	13	82
North Central	8	71
Northeast	16	127
Southwest	42	24
South Central	26	26
Southeast	29	59
South-southwest	32	93
South-southcentral	53	176
South-southeast	25	31
Average	35	82
Iowa (State Dept. Agr.; Ext. Ser.; Ent. Dept., Iowa State Univ.; ENT,ARS,USDA)		
District I	31	59
District II	20	63
District III	45	83
District IV	59	163
District V	50	100
District VI	35	144
District VII	31	249
District VIII	78	236
District IX	96	241
District X	34	335
District XI	74	232
District XII	107	148
Average	55	171
Kansas (Ins. Sur.)		
Northeast	64	152
North Central	39	43
East Central	30	101
Average	44	98
Maryland (Agr. Ext. Ser., Ins. Sur.)		
Eastern Shore	144	339
Southern area	161	205
Western and Central areas	115	344
Average	140	296
Michigan (Ins. Sur.)		
Surveyed counties	44	50
Minnesota (State Dept. Agr.)		
Southwest	19	35
South Central	16	38
Southeast	15	32
West Central	60	58
Central	37	22
East Central	18	11
Northwest	209	99
Average	53	42

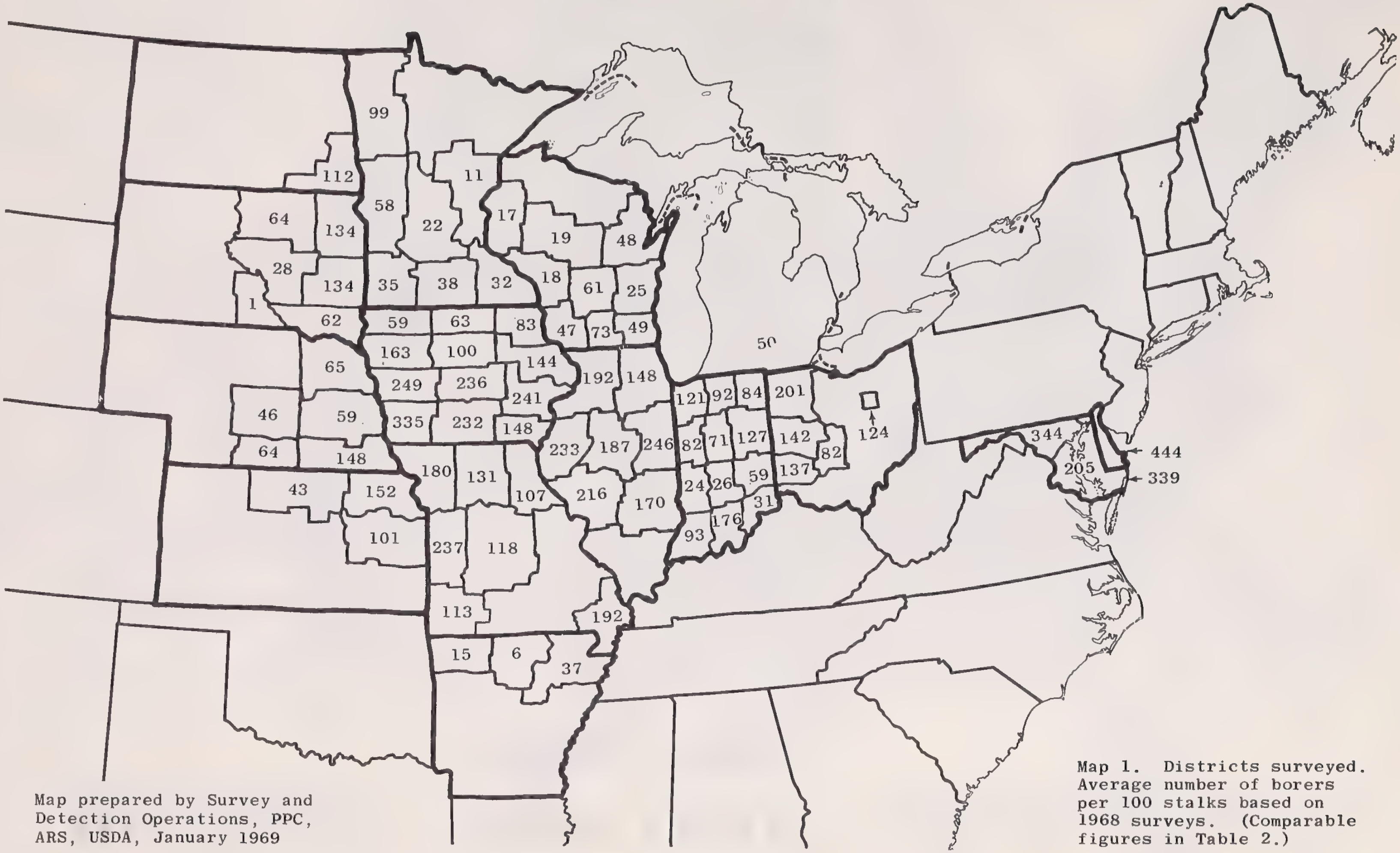
1/ Average based on 40 counties surveyed in 1967 and 39 counties in 1968, rather than districts.

Table 2 - (Continued)

State (Districts or Counties)	Average Number of Borers Per 100 Plants	
	1967	1968
Missouri (Ext. Ser., Ins. Sur.)		
District I	95	180
District II	86	131
District III	87	107
District IV	72	237
District V	92	118
District VII	38	113
District IX	163	192
Average	90 1/	154 1/
Nebraska (Agr. Expt. Sta., Ext. Ser., Ins. Sur.)		
Northeast	46	65
East	44	59
Southeast	60	148
Central	44	46
South	40	64
Average	47	76
North Dakota (State Dept. Agr.)		
Southeast	101	112
Ohio (Ext. Ser.; ARS, USDA)		
Northwest	25	201
West Central	15	142
Central	18	82
Southwest	12	137
Northeast	15	124
Average	17 (18) 2/	137 (157) 2/
South Dakota (Agr. Expt. Sta., Ext. Ser.)		
North Central	145	64
Northeast	155	134
Central	13	28
East Central	64	134
Southeast	92	62
South Central	1	1
Average	78	71
Wisconsin (State Dept. Agr.)		
Northwest	38	17
North Central	12	19
West Central	62	18
Central	40	61
Southwest	72	47
South Central	23	73
Southeast	10	49
East Central	4	25
Northeast	7	48
Average	30	40

1/ Figure for 1967 adjusted for comparison with 7 of 8 districts surveyed in 1968.
2/ Averages culculated from county averages not district averages.

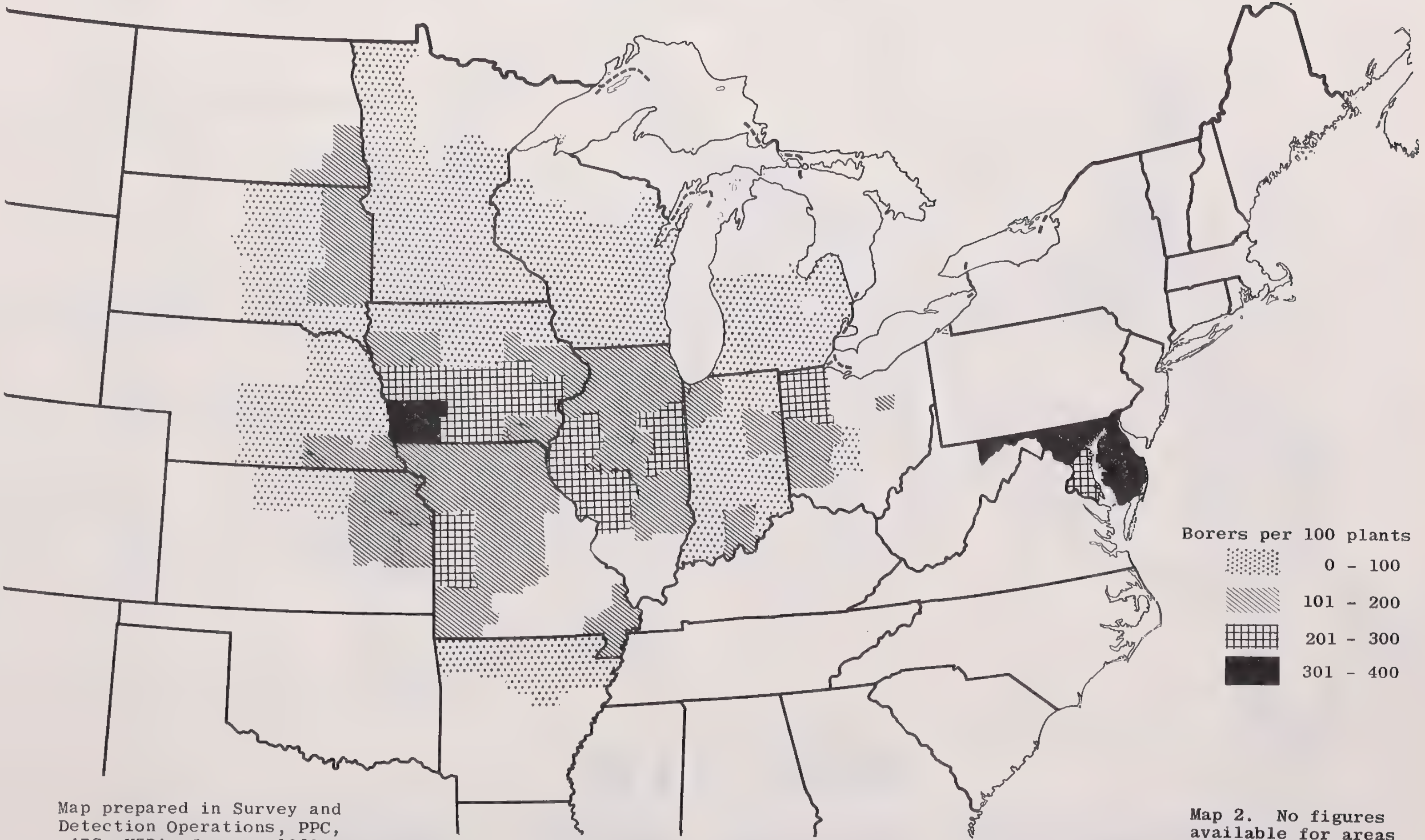
EUROPEAN CORN BORER ABUNDANCE
FALL 1968



Map prepared by Survey and
Detection Operations, PPC,
ARS, USDA, January 1969

Map 1. Districts surveyed. Average number of borers per 100 stalks based on 1968 surveys. (Comparable figures in Table 2.)

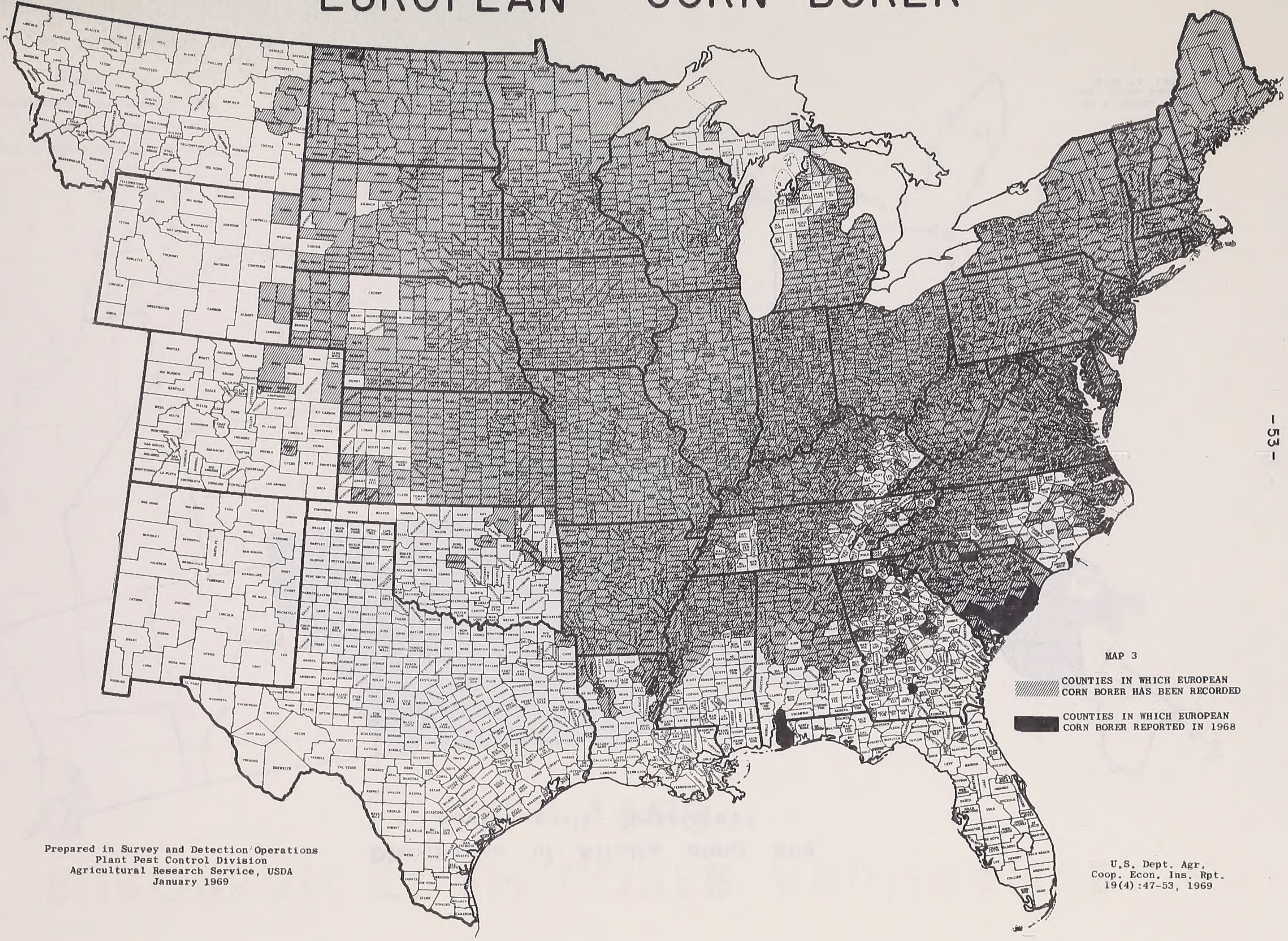
EUROPEAN CORN BORER ABUNDANCE
FALL 1968



Map prepared in Survey and
Detection Operations, PPC,
ARS, USDA, January 1969

Map 2. No figures
available for areas
not shaded.

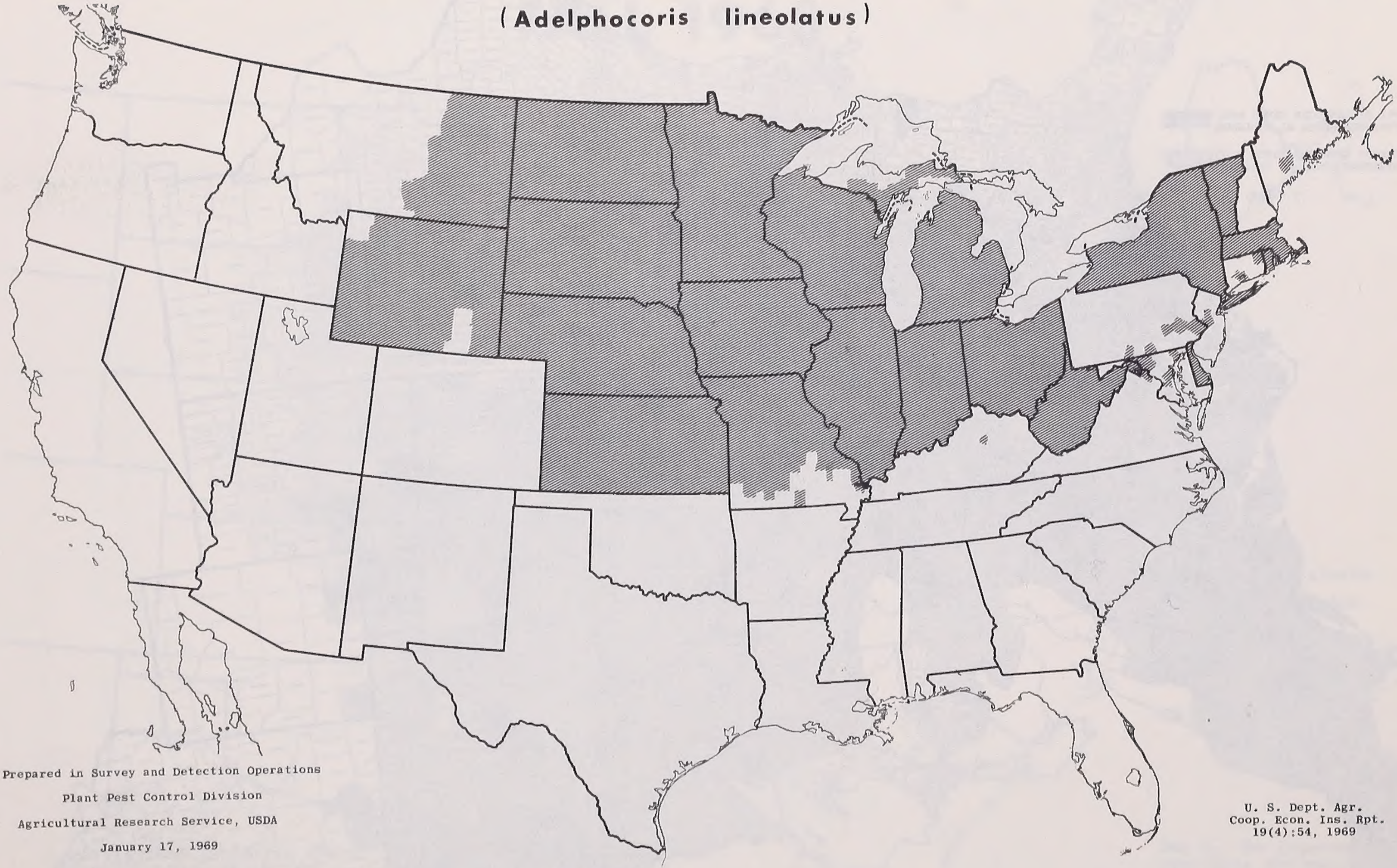
EUROPEAN CORN BORER


MAP 3
▨ COUNTIES IN WHICH EUROPEAN CORN BORER HAS BEEN RECORDED
■ COUNTIES IN WHICH EUROPEAN CORN BORER REPORTED IN 1968

Prepared in Survey and Detection Operations
Plant Pest Control Division
Agricultural Research Service, USDA
January 1969

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
19(4):47-53, 1969

Distribution of Alfalfa plant bug
(*Adelphocoris lineolatus*)



Prepared in Survey and Detection Operations
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Agricultural Research Service, USDA
January 17, 1969

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